

**STRATEGY
RESEARCH
PROJECT**

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**THE ARMY'S 21ST CENTURY
AVIATION BRIGADE IN A LIGHT DIVISION**

BY

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**The Army's 21st Century Aviation Brigade
In a Light Division**

by

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ABSTRACT

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This research project expresses concern over the future of Army Aviation. There are many changes that are ongoing within the Army today. Army Aviation needs to be proactive and recommend some changes to the way it does business and the way it should look in the years to come to support the Army's future. Army Aviation is and will be supporting the Chief of Staff of the Army's (CSA) new vision for the Army. While there is much experimentation ongoing, as well as numerous proposals for the way the structure of the Army will look in the future, there is nothing substantial published on what the future of Army Aviation should be to support the CSA's vision. This project will address some of the issues and concerns of future Army Aviation operations and structure, and will propose some recommendations for the way Army Aviation should look in the not too distant future. Currently, most of the information concerning changes to Army Aviation is sensitive in nature so the majority of this paper will contain the author's thoughts and recommendations.

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TRANSFORMING ARMY AVIATION INTO THE 21ST CENTURY

"Seek to replace the entire fleet of tracked vehicles, including the 70-ton Abrams tanks, with wheeled systems. As quickly as technology allows, erase the distinction between light and heavy forces and turn all divisions into an "objective force" of standardized medium-weight brigades that pack the punch of today's heavy brigades but can be deployed into battle as quickly as today's light units."

— General Eric Shinseki, 12 October 19991

Army Aviation needs to make sure that during the Army's current directed metamorphosis that it stays proactive and not reactive. There are many changes that are being proposed to the new Army force structure but there is not much in print about what changes will need to take place in Army Aviation.

This paper will address some proposals for what an aviation brigade should look like that supports a light infantry division with an assigned new medium brigade. It will attempt to determine what is the right size aviation brigade and what are the right assets. A discussion about what assets a current aviation brigade has and how it needs to change, or not, to meet the demands of the future is critical. Finally, a conclusion and recommendations about the future role and structure of aviation brigades will be proposed.

This paper will primarily address the two aviation brigades assigned to the 10th Mountain Division (Light) at Fort Drum, New York and the 25th Infantry Division (Light) at Schofield Barracks, Hawaii. An assumption is being made that aviation assets that support the 82d Airborne Division at Fort Bragg, North Carolina and the 101st Airborne Division (Air Assault) at Fort Campbell, Kentucky will not initially be affected by the Chief of Staff of the Army's (CSA) vision. That assumption is based on the following comment:

"Retain the XVIII Airborne Corps as the Army's "quick response war-fighting organization" for the immediate future, but review the need for "specialty units" such as the 82d Airborne Division and the 101st Airborne Division (Air Assault) when the medium-weight technologies mature."²

Changes might need to be proposed whether or not those proposals are popular or extremely difficult to accomplish. Frankness now could prevent embarrassment later.

AVIATION BRANCH CHALLENGES

"I'd be less than candid if I told you that I was not concerned about the future of our branch and the future of our mission area. If we continue on the same course that we're on right now, I'm very concerned whether or not we'll actually be able to fulfill the strategic and tactical vision that the Army has for us. If I've ever seen, in my limited experience, a time to think outside the box ... that time is now."³

What is Army Aviation doing about changing for the future? MG Tony Jones, the Chief of Army Aviation at Fort Rucker, Alabama, stated:

"We know where we are, we know where we've got to go, we know what our capability's got to be. It's not about resources. It's about doing what's right, and it's time to do what's

right. I think we've got a good road map out there. Will it be fundable? I don't know. Will we have to prioritize which we'll fix first and delay the others? Yes we will."⁴

The assumption is made that Fort Rucker, Alabama, the home of Army Aviation, is working on future concepts for Army Aviation to support the Chief of Staff of the Army's (CSA's) vision. In fact, they are working these issues very hard. The doctrine folks are working both the Initial Brigade Combat Team and the Modernization Plan. Presently, they feel that doctrine will not initially change dramatically. Aviation will support the initial brigades with a mission dependent augmentation force. All of the core aviation missions, attack, cavalry, lift, and assault, will still be performed similar to what Army Aviation does today.

The Combat Development personnel at Fort Rucker are working all the other issues concerned with reorganization and modernization. They have been putting together briefings and gathering information based on DTLOMS to fit numerous scenarios. They have been working long days and weekends to stay ahead of the CSA's proposed vision in order to enhance the overall capabilities of the Army and act as a force multiplier. However, the information that they are working on is considered to be sensitive and of a closehold nature. Until future briefings and proposals are briefed and approved at the Training and Doctrine Command (TRADOC) level, and ultimately approved by the CSA, the information that the Combat Development personnel are working on is not available to be used in this report. Therefore, the author will propose his recommendations based on 18 years of Army Aviation experience, conversations and discussions with other Army Aviators with similar and greater aviation experience, and any information pertaining to this change in the Army that is available.

Daniel G. Dupont, who writes for Inside the Pentagon, an Arlington, Virginia based newsletter, wrote an article in the March 2000 edition of Armed Forces Journal International about the future of Army Aviation. His article is entitled "Skeptics and Believers: Aviation Has Little Visibility In The New Army Vision. Are Its Helos Losing Lift?" The article encompasses much about the purpose of this research paper and will be highlighted in the upcoming pages.

For the U.S. Army, the first quarter of FY 2000 was as eventful as any in recent memory. General Shinseki, in his position only a few months, was convinced that the Army's first-to-fight forces had to be made faster, lighter, and more deployable. At the annual conference of the Association of the U.S. Army (AUSA) in October, he promised that big changes would be made to ensure that the vision was carried out. Within months, he and the Pentagon leadership terminated seven programs, radically restructured the development of two high-priority weapon systems, including the self-propelled Crusader artillery system, and shifted hundreds of millions of dollars within the Army's spending plan – all to pay for the CSA's transformation vision. Notably absent from the Army's substantial overhaul plans, however, was much talk about aviation. In fact, the CSA didn't mention "aviation" or "helicopter" during his AUSA speech; not even the Comanche helicopter, the Army's top modernization priority, was mentioned. This was interpreted in different ways by aviation backers; some felt lucky that, unlike other Service programs, theirs appeared unlikely to be trimmed or terminated, while others feared that aviation was being ignored

as the Army embarked on the most significant attempt to overhaul itself since the end of the Cold War. Compounding these worries was the secrecy in which many of the moves in support of Shinseki's vision were made. The changes were nominated by a select group of advisors to Army leaders, who approved them in secret and worked with the Office of the Secretary of Defense to make them real without breathing a word about them in public or even informing many in the Army. By the time the news leaked out at the end of 1999, the moves had been made and the vision was under way. Crusader would be made lighter, both in tonnage and in the Army budget. A cooperative effort with the United Kingdom to develop a future scout vehicle was relieved of hundreds of millions of dollars, leaving its future in doubt. Advanced versions of the Stinger missile and the Army Tactical Missile System were killed, as was a command and control vehicle and a smart rocket for the Multiple Launch Rocket System. The funds freed by these and other moves would pay for the new medium-weight brigades, a fleet of "interim" armored vehicles to outfit them, and the acceleration of a handful of programs deemed crucial to the lighter and easier-to-deploy force General Shinseki felt would be needed for future conflicts. Among these programs were an advanced tank-killing missile system (LOSAT), a mobile long-range fire support platform (HIMARS), and a Future Combat System that will one day take the place of the M1 Abrams tank. However, the Army needed to come up with the money required to fully fund the Chief's plans. Army officials hoped that the Pentagon leadership would not only embrace those plans, which it did, but also offer up a substantial amount of additional money to pay for them, which it did not. Thus, the Army was unable to carry out some of the key tenets of the CSA's vision. Prominent among these unfulfilled goals were two high priorities for Army aviation: restoration of the AH-64 Apache attack helicopter's Longbow upgrade program—cut back the year before to pay other bills—and the acceleration of upgrades to the Army's workhorse fleet of UH-60 Black Hawk utility helicopters. Both of those goals, according to Service officials, are high on the Army's list of priorities to work on this spring as it builds a new six-year spending plan.

AVIATOR CONCERNS

But even with all the changes initiated by General Shinseki and the Pentagon in time for submission of the FY 2001 budget request, the Army remains well shy of the funding needed to carry out all of the modernization changes that are key to the Chief's transformation plan. This has put some of those tenets in doubt, and it also means that the Army may be forced again to find additional dollars. Accordingly, the next few months promise much of the intrigue that the end of 1999 brought, and aviation supporters remain worried both about finances as well as a litany of other issues, including training, spare parts and congressional displeasure with previous Army modernization plans. They should be worried, according to Lt. Gen. Johnny Riggs, Commanding General of the 1st U.S. Army and one of the Army's top aviators. In January 2000, at an Army aviation conference, Riggs ruffled some feathers when he declared the branch was in a crisis. He called for an overhaul of current training programs to give pilots more time in the air. He spoke of a lack of clear vision for aviation. And, notably, he condemned the state of aviation modernization, singling out the Apache and the need to field the Comanche armed

reconnaissance helicopter to meet future needs. Riggs' comments were embraced by others at the conference. "A lot of folks thought he was right-on," said a former senior Army aviation official who asked not to be identified. Shinseki, he said, "understands the role of aviation" in the future Army, but "he's concerned about the cost and he's out looking for money. He's also looking at who's got the money." Comanche has an enormous price tag and remains a target for budget cuts in a resource-constrained environment. The Army's intent to purchase more than 1,200 reconnaissance-attack helicopters has long been seen by even die-hard aviation supporters as an unlikely goal, but how far the number might be cut – the Crusader buy has already been sliced by more than half – remains to be seen. "General Shinseki is saying the Army needs another \$10 billion just to get the vision off the ground," said Andrew Krepinevich, director of the Independent Center for Strategic and Budgetary Assessments. However, the Army has been reluctant to tap into force structure any further to pay its bills and "that leaves modernization," he noted. "This is not good news for Comanche or for Army aviation in general," he believes.

A PROMINENT PLACE

According to senior Army officials, Comanche has a place – a prominent one – in Shinseki's vision. Lt. Gen. Paul Kern, the military deputy to the Army acquisition executive, told reporters in January 2000 that the helicopter was looked at hard by Army budget planners during the development of initial vision plans, and it came out ahead. "It fits the requirement as we see it in the 21st century," he said. Overall, says Maj. Gen. James Snider, the Army's program executive officer for aviation, the situation is not as bad as some aviation supporters believe. In fact, Snider feels that things are going quite well. He acknowledges some of the concerns raised by Riggs and others, but he likes the term "transition" to "crisis." Shinseki, he says is a big supporter of Army aviation, and while some modifications are in order, "I don't see any big changes." Aviation wasn't mentioned much as initial transformation plans were being put together, Snider believes, because not any changes are needed. "Our heavy forces have to change," he says. "I don't think aviation has to change as much." Kern concurred, telling reporters in January that the "biggest shortcoming" for the Army is its ground forces. "We can get the Apaches [to the fight]," he said, alluding to the Service's much-publicized Task Force Hawk experience during the Kosovo conflict last year. "It's the other stuff that consumes the weight, tonnage, and time."

THE BIG FOUR

"There have been no cuts to our aviation programs," Snider noted. In fact, either Congress or the Army leadership has increased funding for the "big four" aviation programs in recent months. Those four programs are Comanche, Apache Longbow, the Black Hawk upgrade, and an improved Chinook heavy-lift helicopter, dubbed the CH-47 "F." The CH-47F program got a boost in the final vision funding plan, hammered out in late December. Comanche is considered fully funded and was helped out by Congress. And, according to Kern, the Army plans to boost funding for the UH-60L Black hawk upgrade and restore the Apache Longbow program to much of its former glory. This means that more aircraft will be equipped with the Longbow radar and that a "pure fleet" of only AH-64 "D" models will be fielded to the service's top

fighting forces rather than AH-64s. Snider said in January 2000 that a new aviation modernization plan, due to be delivered to Congress in early March 2000, will address the restoration of previous plans to field more AH-64D Apache Longbow-equipped aircraft, although the numbers were not yet final. As for the Army's UH-60s, "Everybody recognizes that the Black Hawk needs to be modernized," says Snider. "We will fix the Black hawk, I'm sure." He added, "We are really well poised for the next 10 years." Other goals in the new mod plan include the need to rid the active forces of so-called "legacy" aircraft, principally the AH-1 Cobra and the OH-58 Kiowa. Both soak up valuable operations and maintenance dollars, and both are considered far too old and obsolete for the future of the Army. No money is to be spent on either program except for absolutely necessary safety upgrades.

SKEPTICAL VIEWS

Even if the Army cuts back on the number of Comanche helicopters it will procure, Krepinevich contends that "its not clear how you get there from here" – there being a fully, funded, integrated aviation modernization plan. Others outside the Army agree. Congress, too, remains skeptical. Dissatisfied with previous Army aviation modernization plans, lawmakers last year demanded a new one that makes fiscal sense and preserves key priorities like Comanche, a healthy Apache Longbow effort, an upgraded Black Hawk, and an overhauled UH-1 Huey. "Unfortunately, the Army has yet to provide a complete and funded program that adequately describes actions that would modernize, upgrade, or retire the entire range of aircraft currently in the fleet, or provide alternative fleet strategies that would bring current modernization requirements down to a more affordable level," the Senate Armed Services Committee wrote last May. That was before General Shinseki began the transformation process, which has added a substantial new factor to the aviation equation. Kern and Snider believe that the transformation of the Army as a whole means only good things for Army aviation. While there are "valid issues" to be dealt with in the aviation modernization plan, Kern said in January 2000, "I am more optimistic than less optimistic that Army aviation will be a centerpiece of the future battlefield." "Aviation is going to be a huge part of the transformed Army," Snider concurs. "Transformation is really a larger look at making the Army more lethal and lighter, and everything we're doing in our aviation modernization plan furthers those goals."⁵

PAST STUDIES

Sometimes, in order to get to the future, we should look at the past and study some of the events that took place in history. This is not the first time that aviation, or Army Aviation, has changed its force structure or the way it does business. And with the changes that are ongoing in today's Army, this will not be the last time it changes. There have been numerous changes in the Army in the last 20 years. Of note, the Army has undergone the Army of Excellence (AOE) change in the 1980s. From this, Army Aviation underwent the Aviation Restructuring Initiative (ARI) in the late 1980s and early 1990s. This ARI is predominantly responsible for the current configuration of Army Aviation. Now that the Cold War is over, Army Aviation, like the rest of the Army, needs to focus its mission on the issues and topics currently outlined in the National Military Strategy. There are two studies that relate to changes in

aviation that are noteworthy. Review of these two studies could possibly prevent future mistakes concerning decisions about Army Aviation.

Army Aviation began in World War II when the Army Air Forces (AAF) freed themselves from the concept of “air support” and subordination of an aviation commander to a ground commander, and replaced it with the concept of “tactical air” and the Royal Air Force (RAF) doctrine that ground and air force commanders were co-equals.⁶ The role of Army Aviation (i.e. field artillery aircraft, casualty evacuation, emergency resupply, photo reconnaissance, wire-laying, road traffic control, and intelligence gathering) expanded throughout WWII. The National Security Act of 1947 that created the Secretary of Defense, the Departments of the Army, Navy, and Air Force, and other agencies explicitly stated that “The Army … includes land combat and such aviation … as may be organic therein.”⁷ Army Aviation now had congressional sanction and its evolution began. Development of the helicopter and the Korean War strengthened Army Aviation although there was a “roles and missions” controversy with the Air Force. In 1954, the Army’s Aviation School moved from Fort Sill, Oklahoma, to Fort Rucker, Alabama. With tremendous support from the Deputy Chief of Staff for Operations (DCSOPS) of the Army, LTG James Gavin, Army Aviation progressed. MG Hamilton Howze was selected by LTG Gavin to be the DCSOPS Aviation Section Chief. Army Aviation combat developments were numerous and ongoing throughout the late 1950s and early 1960s. On 19 April 1962, Secretary of Defense McNamara produced two memorandums. One directed the Secretary of the Army to undertake a thorough review of Army Aviation requirements, and the other suggested creating a committee that would include, by name, officers and civilians known to be aviation advocates to direct the review.⁸ The Army promptly responded by creating the Army Tactical Mobility Requirements Board, later known as the Howze Board.

In 1962, the Howze Board, named after Lieutenant General Hamilton Howze, Commanding General, XVIII Airborne Corps and Fort Bragg, North Carolina, charted the future of Army Aviation and led to the development of air mobility doctrine and the creation of the first air mobile division. Eventual membership of the board consisted of 199 officers, 41 enlisted men, and 53 civilians. The Board recommended a set of airmobile organizations equipped with rotary and fixed-wing aircraft. They also recommended force structure in terms of the types and numbers of units that would possess aircraft, their proposed aviation structure, and troop strength. Some of the proposed tactical units and aircraft assignments recommended by the Board was: the Air Assault Division, the Air Cavalry Combat Brigade, the Corps Aviation Brigade, a Special Warfare Aviation brigade, and an Air Ambulance Battalion.

The Air Force contested the recommendations of the Howze Board. The Secretary of the Army, Cyrus Vance, and the Chief of Staff, General Earl Wheeler, endorsed the findings of the Board. In 1963, the 11th Air Assault (Test) Division was activated at Fort Benning, GA. Army Chief of Staff General Wheeler instructed its newly designated commander, Major General Harry W.O. Kinnard: “You are going to run the organization. I want you to find out how far and fast the Army can go, and should go in the direction of air mobility.”⁹ It was an innovative approach to Army combat development. As one officer later put it, “For the first time in the history of the Army, a bunch of people had been turned loose with a

high priority on personnel and equipment, and told, O.K., here's the dough, we'll get the people and equipment; [you] come up with a concept and prove it.”¹⁰ The Board’s proposed air assault division would later go on to serve in Vietnam.

The key to the Howze Board was that there were not any constraints placed on the board members. Therefore, all recommendations were fair game. In the 24 January 2000 issue of Army Times, LTG Johnny Riggs, First Army Commander, said the Army needs the 2000 equivalent of the 1962 Howze Board. MG Tony Jones, the Chief of Aviation, disagreed that another Howze Board was needed. In the recommendation section of this report, the author will provide comments on this issue.

The Department of the Navy (DoN) also did a study about the United States Marine Corps (USMC) in the mid-1980s that studied the aspect of less equipment and more firepower. Marines believe that without the “A” in MAGTF, a Marine air-ground task force, there is no MAGTF. Marines rely on aviation assets to make up for the lack of artillery and tanks. Marines do a superb job integrating their air and ground assets. This DoN study was called “DoN Lift-2.” This study was conducted in order to provide the Navy with an honest broker’s assessment of future warfighting requirements. A critical outcome of this study for the Marine Corps was a recommendation to increase the “shooter to transport” helicopter requirements within marine Aviation. At the time, the Marine Corps had less than 100 Attack Helicopters. The results of this “Navy” study afforded the Marine Corps to develop a programmatic structure to increase Attack Helicopter assets to greater than 250 airframes, block upgrade inventories from the Cobra AH-1T(TOW) to the Cobra AH-1W (T-700 engine variant), provide a Hellfire missile delivery capability, develop the Cobra AH-1W night targeting system (NTS), and upgrade the onboard Air Survivability Equipment (ASE). Of recent, the Marine Corps has referenced the DoN Lift-2 study in their current AH-1Z and UH-1Y retrofit programs. It might be prudent to research this Marine Corps aviation study to see if it applies to some of the aspects of Army aviation changes that will probably take place in the very near future. Sometimes services fail to research other projects that sister services have conducted. There is no sense in reinventing the wheel.

SOME LESSONS LEARNED

A review of some past lessons learned from previous aviation operations provides some valuable insight into areas that should be considered when restructuring Army aviation for the future. Lessons learned from Desert Storm in 1991, and Operation Allied Force (Albania – Task Force (TF) Hawk) will be reviewed. It is difficult to only look at lessons learned from a strategic point of view so, at times, this section will dip into the tactical level of lessons learned. The primary focus of these highlighted lessons learned is to identify any areas that will relate to future Army aviation force structure and transformation.

In March 1991, General Crosbie E. Saint, CINC, USAREUR, wrote down some early philosophical observations on the victory in Desert Storm. His comments were made from a CINC’s perspective and do not specifically highlight Army aviation but they do apply to Army aviation’s future. “We moved the deterrence force quickly during Phase 1 of Desert Shield and then discovered that we could move the second part of the package – the “compellence force” – from forward deployed locations in Europe just as

quickly, or perhaps even faster. What we didn't do well was figure out how to synchronize the strategic movement of things with that of people.”¹¹ This comment almost 10 years ago, specifically applies to the current CSA's vision. The 82d Airborne Division deployed early to Desert Shield/Desert Storm and made a mark in the sand. Although they deployed rapidly, their staying power and lethality are limited. This is why the CSA's vision stresses the medium-brigade, which is expected to have vehicles with firepower and be able to deploy within 96 hours. This is also why Army aviation needs to be rapidly deployable. Aviation brings lethality, flexibility, and speed to the operation but if it does not get there in time to complement the new medium-brigade, aviation will never fully be the force multiplier that it is. So, as Army aviation looks to the future, it cannot forget about getting to the fight early (remaining highly deployable) and providing doctrine that will be integrated into the new medium-brigade. This is probably the biggest strategic level lesson learned from Desert Storm that applies to Army aviation.

At the operational level, “the operational value of airpower certainly made our job easier.”¹²

“Operation Desert Storm validated the concept of a campaign in which air power, applied precisely and nearly simultaneously against centers of gravity, significantly degraded enemy capabilities. Air power degraded much of the Iraqi command structure, markedly reduced military production, made the Iraqi Air Force ineffective, and significantly degraded the overall combat effectiveness of the Iraqi army in the Kuwait Theater of Operations (KTO). The theater campaign strategy exploited wise investments, superior planning, people, training, doctrine, and technology to achieve surprise. Technology gave the Coalition a decisive edge. Stealth precision guided munitions (PGMs), suppression of enemy air defenses, C3I, air refueling, reconnaissance and surveillance aircraft, space systems, night-fighting capabilities, tactical ballistic missile defense systems, logistics systems, airlift and sealift, cruise missiles, attack helicopters, remotely piloted vehicles, and flexible-basing aircraft made major contributions. Mission capable maintenance rates were higher for most aircraft than peacetime rates, despite harsh desert conditions, high sortie rates, and flight under combat conditions.”¹³

Apache attack helicopters were able to strike deep at night with precision. Much of the Iraqi command and control assets were targeted by Apache helicopters. They also were devastating as tank killers on the battlefield. The CH-47 Chinooks and UH-60 Black Hawks were able to move troops, supplies, and fuel at distances that had only been done at battle simulation exercises. The ability to project fuel and supplies forward allowed attack helicopters to operate forward for longer periods of time.

“The size of today's battlefield is dependent on the speed of unit movement and the ability to supply units with fuel. To meet today's demands, the Army must seek innovative methods to insure units have the fuel for a fast-paced force projection. Lessons learned during Operation desert Storm and other stability and support operations indicate it has become a challenge for today's Army to provide fuel to units when and where they need it. Modernization of fuel equipment, coupled with new technology, provides commanders with the capability of accomplishing their mission of force projection and decisive operations.”¹⁴

The reader needs to keep the issue of fuel in mind when reading the upcoming section on the recommended future structure of the aviation brigade. Modernizing fuel equipment will provide commanders the capabilities needed to accomplish their mission of force projection and decisive operations. Units will not be able to dominate the battlefield without upgrades of this nature.

"Of concern, however, is the notion that the "air campaign" was everything before the ground war began. We ought not let that assertion go unchallenged. There was only one campaign to achieve the strategic objectives of forcing Saddam's forces out of Kuwait and destroying their offensive potential. It was jointly conducted by land, sea, and air forces – sometimes sequentially, sometimes simultaneously."¹⁵

"At the operational level, U.S. and Allied forces executed Desert Storm as a rather sophisticated game of chess. The Iraqis were playing checkers. It never seemed to occur to them that we could extend the depth of the battlefield to attack all of their formations simultaneously. The operational maneuver of substantial force "to gain positional advantage over the enemy" meant that the outcome of the battle against the republican guard was a given before it had even begun. Our practice of agility, initiative, and synchronization at large unit level put us inside their decision cycle over and over again."¹⁶

At the tactical level, US forces had a substantial advantage of the four elements of combat power – firepower, maneuver, protection, and leadership. In the big scope of things, technology worked. The Army aviation platforms responded well and the operational readiness rates were superb. Although there were many challenges and some shortcomings, the current fleet of aircraft at that time, performed admirably. It was the Apache's coming out party. Two highlighted areas of concern were the lack of a responsive surveillance system and the need for non-cooperative IFF (Identification of Friendly Forces) systems for both the ground and air. These issues should be considered as the Army upgrades and modernizes its fleet of the future.

Two tactical areas that directly affected Army aviation, as well as the rest of the Army, were highlighted by General Saint in his Desert Storm lessons learned message. The first area was personnel. "At the last minute, both USAREUR and FORSCOM had to fill with forces pulled external to deploying units. We are only kidding ourselves if we think this leads to cohesive squads, crews, and teams. There is real folly to undermanning if we want a capable professional force."¹⁷ The second area was training. "The Army's training methodology was proven in spades. From precision gunnery techniques to the value of combat training centers, it was great to hear the new combat veterans often remark that their last density was tougher than the Iraqis. Protecting optempo and dollars to maintain that caliber of training must continue to be a key lesson that we tell everyone who will listen. Even our German friends now have a better appreciation as to why we shoot late into the night and fly at low levels. Sudorov was right: "Easy training, hard combat; hard training, easy combat."¹⁸

Switching to Operation Allied Force in Albania, Task Force (TF) Hawk was organized and deployed to provide NATO with a deep strike capability out of Albania into Kosovo. The US Army has not employed attack helicopters in deep operations since the Persian Gulf War. The primary mission of the utility and cargo helicopters was to support the TF Commander's combat support and combat service support plans.

TF Hawk consisted of one attack helicopter regiment (ATKHR) with 24 Apaches and one Corps Aviation Brigade (CAB) with 31 aircraft consisting of UH-60 Black Hawks, CH-47 Chinooks, and C-12

fixed-wing aircraft. The ATKHR mission was to conduct raid-like attacks to destroy designated targets and to degrade enemy forces and prevent them from continuing military operations. The CAB mission was to provide support aviation for task force operations to include command and control, Downed Aircraft and Aircrew Recovery Team (DAART), Forward Arming and Refueling Point (FARP), medical evacuation, and Quick Reaction Force (QRF).

The lessons learned from Operation Allied Force and used in this report come direct from the Center for Army Lessons Learned (CALL) manual titled "TF Hawk CAAT Initial Impressions Report."¹⁹ Some lessons learned from Operation Allied Force might seem well below the strategic level, but it is important to consider that issues affecting the force structure of Army aviation's future is very strategic. Also, this operation is the most recent operation that the US Army has participated in and current lessons learned now have a tremendous impact on the way the Army deploys and fights in the future. Areas that will be reviewed include the ATKHR, Uh-60s, CH-47s, training, A2C2, G3 Air, ranges, ABCCC, aviation maintenance, and personnel.

Attack Helicopter Regiment (ATKHR).

- Located its S2, S3, ALO, and S6 adjacent to the Deep Operations Coordination Cell (DOCC).
- Integrating the ATKHR into the DOCC facilitated integration of fire support and air assets.
- There was a shortage of AH-64 Subject Matter Experts (SMEs) for liaison (LNO) requirements and at the DOCC.
- A fire support officer (FSO), Major, should be added to the ATKHR TOE.
- AH-64s need reliable automatic directional finders (ADFs) as a primary Inadvertent Instrument Meteorological Condition (IIMC) recovery aid.
- Assign specific targets to AH-64s and configure them to achieve desired effect.
- External fuel tank operations require additional training.
- Additional AH-64 aviator training is required for operating at high gross weights.
- Night vision goggles (AN/AVS-6(V)1A) with the omni 4 tubes enhanced AH-64 tactical night flight operations.
- A mixed flight formation of AH-64 and UH-60s using night vision devices during blackout operations require alternate lighting considerations.
- Primary means of communication in mountainous terrain is SATCOM. Back-up means was UHF, VHF, and FM from the TF helicopters to ABCCC.
- Redundant C2 linkage required when conducting deep operations.

UH-60

- The DART support mission required special equipment and aircraft modifications for mountainous terrain.
- Extended range fuel systems were essential for Deep Operations support.
- Install internal extended range fuel tanks on FRIES equipped Black Hawks.

- Airborne SATCOM on tactical helicopters may be intermittent during terrain flight in mountainous terrain.
- A seats-out MACOM waiver for FRIES operations was essential for DART support.
- The 172-gallon Robertson internal extended fuel system provided safe extended on-station mission support time; however, the tank further reduced the Black Hawk's limited internal load carrying capacity.
- The external Extended Range Fuel System (ERFS) provided ample extended on-station time; however, the fuel tanks had the following deficiencies:
 - Were not crashworthy.
 - Were not ballistically tolerant.
 - Contained pressurized fuel.
 - Limited lateral center-of-gravity balance.
 - Severely restricted airspace surveillance.
 - Severely restricted the window gunner's fields of fire.
 - Degraded the aircraft performance and maneuverability.
 - Hampered passenger ingress and egress.
 - Presented a high risk of post-crash fire.
 - Could not be hot refueled.
 - Could not be used with FRIES.

CH-47s

- Extensive planning to include dry runs and rehearsals supported successful execution of Fat Cow FARP operations by synchronizing support personnel, crew, and security forces.
- Infantry can be used as site security during Fat Cow missions but limits the amount of available fuel for the mission.
- A MACOM waiver for seats out is required for the execution of the Fat Cow mission if security forces are utilized.
- TACSAT overcomes the limitations of mountainous terrain on traditional line of site communications equipment.
- Incorporate the CH-47 aircraft into deliberate DAART aviation operations.

Training

- Units must coordinate Host nation support, airspace deconfliction, and terrain management to conduct live firing.
- Aviation units need to establish a working relationship with the Combined Air Operations Center (CAOC) prior to conducting operations. The CAOC should send a representative to aviation units to brief the Air Tasking Order (ATO) procedures. Communications link between Army aviation units and the CAOC needs to be redundant and secure.

- Good communications between aviation and artillery assets is a critical link when conducting deep attacks.
- Coordination with the US Embassy in the AO, and host nation authorities is essential when setting up a test fire area.
- Include weapons test fire area procedures in the deployment Aviator Procedures Guide (APG) and keep the CAOC informed.

A2C2

- Multi-national and multi-mission requirements for airspace presented C2 challenges.
- Used the Corps ATS battalion personnel to staff this section and it was very successful. However, this was a challenge because of Split Base Operations (SBO) at home.
- Need 3 officers, 3 NCOs, and 2 soldiers to operate this cell.
- Increase the ATS TOE by one officer and one NCO.

G3 Air

- Not manned for 24-hour operations but required to do so.
- Unable to participate in the G3 Plans cell due to commitments.
- The Fire Support Element (FSE) assumed the duties of Aviation planning within the DOCC because of the small size of the G3 Air cell.
- One captain and one SFC were not enough.
- The DOCC is an ideal place to coordinate deep attack assets.

Ranges

- G5 (country facilitator) needs to conduct Host nation coordinations to help maintain a training program while preparing for combat operations (AH-64 and small arms).
- G3/S3 must continually plan for training even in a combat zone.

ABCCC

- Used for situational awareness and C2 during deep attack exercises, linking the AH-64s to the DOCC.
- C-12s can be outfitted with a communications package for airborne communications relay for deep operations.

Aviation Maintenance

- Aviation maintenance units faced many challenges in support of TF Hawk. One of the most critical elements in providing aviation maintenance support was the demand of Split Base Operations (SBO).
- AVIM/AVUM should conduct training using short-term PLL packages at home station to validate the effectiveness.
- Plan for the maintenance contact teams at intermediate stops along the self-deployment route.
- Finalize task organization well in advance for SBO.
- Units should deploy with sufficient TMs, PLL, battery chargers, special tools, ULLS automation and operators.

- Prior to departing home station, higher headquarters needs to review procedures and policies on how to conduct SBO.
- Prepare a “robust” support package with the necessary personnel and equipment to support deploying forces. Individual units must be self-sustaining in case they are sliced for other contingency operations.
- When aviation maintenance was the priority over soldier details, the soldier proved that they could maintain Army aircraft to meet mission requirements and Army readiness standards.

Personnel

- TF was more capable and retained greater flexibility by deploying two squadrons of ready crews to support one squadron of aircraft.

WHAT WILL THE MEDIUM FORCE LOOK LIKE?

“Design and equip an “objective” medium-weight force that can put a combat-capable combined arms brigade anywhere in the world within 96 hours, with the rest of the division following within 24 hours. Immediately begin converting selected brigades to an interim medium-weight design using “off-the-shelf” equipment available. The first of these brigades will be a heavy brigade of the 2d Infantry Division at Fort Lewis, Washington, which the Army will begin to convert in 12 months. The 1st Brigade of the 25th Infantry Division (Light), also based at Lewis, will follow shortly after.”²⁰

Although the medium-size brigade is still conceptual, there are ideas and proposals on the table. As testing continues over the rest of this calendar year, what the medium-size brigade will look like will start to solidify. The following paragraphs will describe some of the current plans. The next two paragraphs will highlight information from comments made by MG B.B. Bell, CG, Fort Knox, KY.

The Infantry School will have proponency for transforming Fort Lewis’ light brigade into a “heavy light” brigade and the Armor School will have the proponency for turning Fort Lewis’ heavy brigade into a “light heavy” brigade. The first unit to undergo transformation will be the light brigade. The ultimate goal is a common medium weight design. The intent is to create units suited to Kosovo style operations. The current idea is that both brigades will feature three maneuver battalions of four companies each, a Recon-Surveillance-Target Acquisition (RSTA) squadron, and an ACR-style CSS squadron. The maneuver battalions will have 120mm mortar platoons and each maneuver company will have a 120mm-mortar section. The RSTA will have three ground troops, four UAVs, a chemical recon detachment, and a whole array of sensors. The brigade will probably have a javelin equipped AT company. There are no organic engineer, field artillery, air defense artillery (although stingers will be worked in somehow), or aviation elements. Signal assets will be a little beefed up with more satellite capability. A colonel will command the brigade.

No decision has been made yet concerning what the base vehicle for these medium weight brigades will be. The intent is that there will be a “drive-off/shoot-off” right after Christmas to pick one. Three wheeled designs and one tracked design are being considered. Among the wheels is the LAV. The track is the armored gun system from several years back. The most use possible will be made on

the chassis of whatever is picked. Whatever is picked, the CSA wants to start fielding it in this FY. It is unclear how the acquisition hurdles can be negotiated to allow this but there are people working on that. Modeling so far indicates that wheels are more maintainable and deployable but that tracked systems have more combat potential. Initial plans call for creating five brigades. It is not sure where the next three after Fort Lewis will be.

"To achieve the required joint operational capabilities and remain the world's dominant land force, the Army must develop new, adaptive and innovative capabilities. These capabilities must be built around full spectrum versatility, strategic responsiveness and joint interoperability – each enabled by aggressively capitalizing on advances in information technology and the full potential of the human dimension of warfare. This requires an organizational structure that integrates the unique capabilities of the Army's light and mechanized forces and Army XXI experimentation in headquarters design and human dimension of warfare into a rapidly deployable, early entry, medium weight force. The major theater war (MTW) requirement to deter and win large-scale aggression in distant theaters remains the most dangerous threat to our national security. Small-scale Contingencies (SSCs) and operations at the lower end of the operational spectrum such as humanitarian and disaster relief operations and peacekeeping/enforcement, however, have been and will continue to be the most frequent challenge the Army will face in the future. Offsetting their inherent weaknesses, enemy forces will seek advantage in urban and complex terrain and will apply diverse and poor weather and in the diversity and time sensitiveness of humanitarian issues. Their operations will be dispersed, decentralized and distributed, adapting their tactics to provide them the best success in countering a US response. The most challenging aspect of future threat forces is their application of asymmetric tactics and technologies to counter the technological and numerical advantages of US joint systems and forces and to exploit constraints placed on US forces as a function of our cultural bias."²¹

The Army will spend the next several months developing new fighting tactics. Those, more than the new equipment, are the keys to the success of the new concept, said Major General James Dubik, who will oversee the conversion of the medium-weight brigade program. "It's really not about platform and equipment," he said. "What we're talking about is transforming the way we fight."²²

As the Army wrestles with what the medium-size brigade will look like, Army Aviation needs to look at its current structure and prepare for the future. By becoming more light and deployable, the medium size brigade could need additional firepower. This is where Army aviation comes in and has the ability to add needed lethality, firepower, flexibility and agility. Army aviation, just like the idea highlighted in the DoN Lift-2 study, needs to fill any firepower and combat capability voids identified with the introduction of the medium size brigade.

CURRENT ARMY AVIATION BRIGADE STRUCTURE IN A LIGHT DIVISION

"We wisely prepare for the future through a balanced review of past events and predictions for future operations. The last decade saw tremendous political turbulence in the world that caused the Army and Army aviation to dramatically adjust the mission profile we had operated in since the end of World War II."²³ A review of the current configuration of the aviation brigades at Fort Drum, New York, and at Schofield Barracks, Hawaii, is essential. It is important to establish a base of where we are currently at in

order to see where we ought to go. Generically speaking, the following depicts the current force structure of an aviation brigade in the light divisions:

One Brigade Headquarters (A Headquarters and Headquarters Company - HHC). Does not contain any helicopters.

One Cavalry Squadron consisting of 16 OH-58D Kiowa Warrior helicopters. There are two air troops and each has eight OH-58Ds.

One Assault Battalion consisting of 30 UH-60L Black Hawk helicopters, eight UH-60A Black Hawk helicopters, and three EH-60 Black Hawk "Quickfix" helicopters. Each of the two assault companies has 15 UH-60Ls. The general support company has three UH-60A VIP helicopters, five general support UH-60A "slick" Black Hawks, and the three "Quickfix" EH-60s used by the Military Intelligence Battalion.

One Attack Battalion consisting of 24 OH-58D Kiowa Warrior helicopters. There are three attack companies and each company has eight OH-58Ds.

One Air Traffic Service (ATS) Company that does not have any helicopters.

One Aviation Intermediate Maintenance (AVIM) Company that does not have any helicopters but could have "float" helicopters in some cases. Each of the battalion size units has their own aviation unit maintenance company.

In conversation with numerous former battalion commanders that have or are attending one of the Senior Service Colleges, not one commander ever deployed to the National Training Center (NTC), the Joint readiness Training Center (JRTC), or a Small Scale Contingency (SSC) with their pure battalion. All were either part of or in charge of an aviation task force that consisted of all of the slices of aviation assets. One of the difficulties in training as you fight is that these task forces would be thrown together a few weeks before the major training event. One of the problems that Army aviation had was that their doctrine did not match their structure. This poses quite a challenge for the aviation task force commanders and their chain of command. This author believes that the Army of Excellence (AOE) and the Aviation Restructuring Initiative (ARI) that took place in the 1980s did not address the issue of training like we fight. This is a key point to keep in mind because examples of some of the Small Scale Contingencies that the Army has been involved in are referred to later in this report. In further discussions with these former aviation battalion commanders, the aviation brigade that they were assigned to did not deploy to either of the training centers. The only time the aviation brigade went to the field was for the Division Warfighter Exercise. So, if we are not organized like we would fight, why not make some changes so that we are? The timing is right while all of the Army transformation is ongoing.

Here are examples of the force structure of some of the aviation task forces that have deployed in the last few years:

- Operation Provide Comfort (Northern Iraq - began in 1991)

Army aircraft utilized include the AH-64, OH-58D, CH-47, and UH-60. Exact numbers of aircraft used during this operation have varied over the years but the point to be made is that the aviation

task force commander is in charge of all these different types of helicopters which is not from his organic unit.

- Hurricane Andrew Relief (Homestead, Florida)

Initially, the 18th Airborne Corps from Fort Bragg, NC, deployed with aircraft from the 82d Airborne Division, the 10th Mountain Division from Fort Drum, NY, and CH-47s and maintenance support from the 24th Infantry Division in Savannah, GA. No UH-60s were used in this operation except by the Florida National Guard. The Army Forces (ARFOR) eventually became the 10th Mountain Division and the only aircraft that they had in support of this operation was 12 UH-1s and 8 OH-58s.

Periodically, they received CH-47 support from Savannah. Again, this was an aviation task force that was not an original organic unit.

- Operation Restore Hope (Somalia)

The 10th Mountain Division from Fort Drum, NY, deployed to Somalia as the ARFOR Headquarters. In the aviation task force that deployed, there were 50 helicopters. There were UH-60A Black Hawks from Fort Drum and UH-60As from Fort Campbell, KY. The OH-58 Scout and the AH-1 Cobra helicopters were from Fort Drum. The 15 UH-60Q Medevac Black Hawks came from Fort Bragg. Again, a potpourri of aircraft making up the aviation task force.

- TF Eagle (Bosnia-Herzegovina – began 1995)

"TF Eagle uses all types of Army rotary-wing aircraft, including the AH-64, UH-60, OH-58 and CH-47s from various CONUS-based and USAREUR units. The mission includes reconnaissance and security, troop movement and transportation of supplies, with deployed units operating at a greatly accelerated pace. Although TF Eagle is a text book case for stability operations, it has the potential to quickly progress to an armed conflict and is a multidimensional effort that is a testament to our ability to be responsive and to adapt to changing times and the instability of international politics."²⁴

- TF Hawk (Operation Allied Force) – Albania.

Aviation elements of TF Hawk include one Attack Helicopter Regiment (ATKHR) with 24 AH-64 Apache attack helicopters divided into two squadrons, one Corps Aviation brigade (CAB) Task Force (TF) with 31 support aircraft including 15 UH-60 Black Hawks, 8 CH-47 Chinooks, 6 UH-60Q Medevac Black Hawks, and 2 C-12 fixed-wing aircraft.

- TF Falcon (Kosovo)

TF Falcon consists of 10 UH-60 Black Hawks, 8 AH-64 Apaches, 8 OH-58D Kiowa Warriors, and 2 CH-47 Chinooks. Besides a Headquarters element and an Aviation Intermediate Maintenance (AVIM) Company, there are 8 AH-64s from the United Arab Emirates, and a Ukrainian HIP Company.

- Hurricane Mitch (Central America) – Fall, 1998.

"More than 5,700 soldiers deployed to Central America to aid the recovery effort, allowing Joint Task Force-Bravo to rescue some 700 people and deliver 2.5 million pounds of food, nearly 100,000 pounds of medical supplies and 70,000 gallons of water. Army aviation played a major role in this operation, completing nearly 350 aircraft missions with a total of 25 CH-47 and UH-60 aircraft. In the first month of the operation the aircraft flew

more than 330 hours, while distributing nearly 300,000 pounds of food, 11,000 pounds of medical equipment and 50,000 pounds of miscellaneous supplies. Movement of key personnel was a vital part of their day-to-day operations. This response to a country in need typifies an Army aviation support operation.”²⁵

RECOMMENDATIONS ON THE FUTURE STRUCTURE OF AN AVIATION BRIGADE

Based on the fact that aviation units do not deploy or train as a pure unit, using the aforementioned examples, the author recommends that we organize like we fight. Since the “Big Four” will not change in the very near future, with the exception of upgrades, this is the time to concentrate on many of the commodity areas that have been overlooked in past years, such as communications capabilities and refuel requirements. Also, the structure of an aviation brigade needs to be able to support the concept of the new medium-size brigade. Therefore, based on many years of aviation experience and numerous conversations with senior Army aviators, former aviation brigade commanders, and former aviation battalion commanders, the author recommends that the future structure of an aviation brigade consist of the following:

One aviation brigade headquarters. The aviation brigade of the future needs to be more robust. Included in the headquarters, which would be a large addition to the current aviation brigade structure, would be at least 16 liaison officers (LNOs). The LNOs would consist of four UH-60, four AH-64, four OH-58D, and four CH-47 qualified personnel. As the Comanche is fielded, replace the OH-58D Kiowa Warriors. All the LNOs would work in the S3 section of the aviation brigade. Twelve of the LNOs would be aligned to their respective infantry brigades (i.e. 1 UH-60, 1 AH-64, 1 OH-58D, and 1 CH-47 LNO per infantry brigade). There has always been a shortage of LNOs and they have constantly been pulled out of hide. The tour of duty for an LNO would be at least one year. Since there are three infantry brigades in each division, the fourth set of LNOs would work in the aviation brigade S3 section. These LNO positions need to be billeted as very important steps in a captain’s career. It is recommended that they do this job right before or after command. Another form of LNO that needs to be expanded is that of the Assistant Division Aviation Officer (ADAO). This needs to be a field grade officer and they need to have a warrant officer, senior NCO, and an administrative assistant assigned to their cell. This will also give the cell a 24-hour capability versus “hey youing” someone at the last minute. Along with these personnel capabilities, these LNOs need to have vehicle assets with a robust communications package attached. To make the point again, this is a good time to get aviation branch right while the Army is deciding on new equipment. The airframes that we currently have, with the exception of the UH-1, AH-1 and the OH58, will be with us for quite awhile so we need to concentrate our efforts on those areas that have been neglected for so long. Throughout the aviation brigade, the communications assets need to be upgraded. Communications is the key to all that we do and it should not be an afterthought. This goes as well for fuel and refuel capabilities. Aviation assets need to include the most current, efficient, and state of the art fuel capabilities and equipment. It’s not just for the special operations units anymore. Robertson pumps were used in Kosovo and Bosnia. All units should have that type of technology. The 25th Infantry

Division's Aviation Brigade still has tank and pump unit 5-tonns. They didn't even have a refuel point at the airfield until 1996. Until then, refuel procedures were done by "cold refueling" means as the 5-ton tank and pump unit came to the flight line and topped-off aircraft once they were mission complete. The Division just fielded new UH-60L Black Hawks in 1997, they just outfitted the Cavalry Squadron with OH-58D Kiowa Warriors in 1999, and the Attack Battalion was the last active duty unit to have AH-1 Cobras. They will receive OH-58Ds this year. Yet, as this fielding is ongoing, the refueling capabilities remain in the 20th Century. This is totally unacceptable. Army leadership, especially Army aviation leadership, needs to speak up and be accounted for. It is time to get this right.

One cavalry squadron. The current configuration of the cavalry squadrons in the current light divisions is acceptable. They will continue to act as the eyes and ears for the division commander. Essential to proper cavalry missions is their ability to communicate. If any one unit in the aviation brigade needs to have improved and abundant communications capability, the cavalry squadron is it. The latest communications technology that is interactive with the other units within the division is imperative. Along with this will be the requirement to increase the number of communications personnel assigned to the squadron. The fuel and refuel issue is critical. The cavalry normally operates independently and to the forward sectors or flanks of the division. They need to be as self-sufficient as possible. Acquiring the latest refuel technology and equipment is paramount. Another consideration is the need for medics. Although this is a shortage in the Army, there needs to be a huge push for more medics in the combat units. The idea of combat lifesavers is good but it has now taken over the place of medics because of the shortage. Combat lifesavers are not a fix for the lack of medics. They are both combat multipliers and shortages are unacceptable.

Three aviation battalions. These three battalions will be identical in force structure. Each one of these battalions should be aligned with one of the infantry brigades in the division. This will facilitate a mutual relationship that is essential. Today, divisions have Brigade Combat Teams (BCTs) and aviation is not part of that team. This is ridiculous. Aviation gets assigned to the BCT at a late date, they train-up for an exercise or deployment, and when they return to home station, the relationship that blossomed is gone. This is not a good way to do business in any business. The author believes that a typical aviation battalion should look like this:

One headquarters company. Take the current headquarters company of an assault battalion and add the following:

- Six LNOs.
- One S2 Lieutenant, one intelligence sergeant and one specialist.
- Five fuel handlers and updated fare equipment. Although the 77Fs are usually consolidated at the brigade level, there should be some resident expertise within the battalion.
- Four more communications personnel and state-of-the-art communications equipment for ground and air assets. At least two of these communications personnel should be avionic technicians.
- Assign at least two medics per company.

One company of UH-60Ls. Change from 15 UH-60s to 12 UH-60s. Ten of the UH-60s will be used for air assault and logistical missions. Each the UH-60s need to have the ESSS capability, fuel pods and ammunition accessories. The other two UH-60s will be command and control (C2) aircraft. They need to be outfitted with the most current technical communications capabilities in the field. It is absolutely essential to have two crew chiefs per aircraft. This was a recent change in 1996 but even though those crew chiefs are authorized, they are not on hand. Check with the Air Force, the Navy, and the Coast Guard about the number of crew chiefs assigned per aircraft. They take this issue very seriously. It is time the Army does the same thing. There also needs to be an assigned Executive Officer (XO). In the past, they were pulled out of hide. XOs are a critical piece of the pie and this should become an authorized slot.

One AH-64D Company. Recommend six Apaches. Communications assets need to be state-of-the-art, abundant, and able to transmit over long distances. Deep operations are the calling card for the Apache and without communications, operations are severely degraded. Increase the number of armament personnel by three – one NCO and two specialists.

One OH-58D Company. (later to be replaced by the Comanche). Recommend eight Kiowa Warriors. The same reasoning used for the Apache company applies to this company for communications, armament, and fuel personnel.

One Air Traffic Service (ATS) Company. There are currently 48 personnel assigned to an ATS company. That number needs to increase by 12 in order to facilitate 24-hour operations. The equipment in many of these companies is absolutely antiquated. This equipment needs to be upgraded with current Air Force and/or special operations equipment. There needs to be more mobile equipment (i.e. NDBs) and the personnel and structure needs to be more like that of the Combat Control Teams (CCTs) in the Air Force.

Aviation Intermediate (AVIM) Company. Change this company to a battalion. Most of the companies are currently as large as a battalion and with the changes to multi-functional battalions, the maintenance support size should not decrease. This battalion should be commanded by a Lieutenant Colonel. Insure that the AVIM battalion remains with the aviation brigade, not the DISCOM. The AVIM battalion should maintain excess aircraft of each type within the brigade. A recommended number is two per type of aircraft assigned to the brigade. Let the AVIM battalion do more maintenance. Have a system set up that is similar to the Direct Exchange (DX) program. The rules would have to be clearly defined but if there is an aircraft that everyone knows will be down for quite some time, at the discretion of the brigade commander, he can authorize a direct exchange. Also included in this battalion will be six CH-47 Chinook helicopters. They will come under the control of the aviation brigade and be used as a brigade asset. Although the author considered having them assigned to each multi-functional battalion, it was felt that having them at least under the control of the aviation brigade was an improvement over them currently being assigned under the Corps Support Group. At least all aviation assets within a division would now come under the command and control of the aviation brigade commander. The AVIM

battalion would need to increase its assets to include support and personnel for the additional aircraft. The UH-60 LNOs in the aviation brigade would have the task of coordinating for CH-47 assets. The equipment used by this battalion will need to undergo a significant technical upgrade. Currently, the light divisions do not have Apaches. This will require an increase in maintenance personnel and equipment. Two areas that need to be included throughout the aviation brigade are Night Vision Goggles (NVGs) and Aircraft Survivability Equipment (ASE). Needless to say, these areas need to have addition emphasis and money placed into their respective worlds. Again, this is a good time to get this area right and strong while the Army transformation is taking place.

A quick comparison chart of the old aviation brigade structure in a light division versus the author's proposed concept of the new aviation brigade is as follows:

Old Aviation Brigade		Proposed Aviation Brigade	
Unit	# of Aircraft	Unit	# of Aircraft
HQ Company	0	HQ Company	0
Cav Squadron	16 OH-58DS	Cav Squadron	16 OH-58DS
Assault Bn	41 UH-60LS	3 x Avn M/F Bn	36 UH-60LS
Attack Bn	24 OH-58DS		24 OH-58DS
			18 AH-64DS
AVIM Company	0	AVIM Bn	2 OH-58DS
			2 UH-60LS
			2 AH-64DS
			6 CH-47DS
ATS Company	0	ATS Company	0

TABLE 1 AVIATION UNIT COMPARISON

Note: The OH-58Ds will eventually be replaced by Comanche when the fielding is completed. The replacement for the CH-47 is yet to be determined. A tilt-rotor platform could eventually be selected. The M/F in the three newly proposed aviation battalions stands for multi-functional.

No matter what the proposal, the question or comment is always going to be about money. Do you have enough money to do it? It's all a matter of priorities. "A fully funded Component Improvement Plan (CIP) not only represents a great community for our business partners, it is also a proactive "tool" that helps the entire Army aviation community. Last year the Air Force spent \$167 million on its CIP, while the

Army spent \$4 million, \$400,000 of which went to the Apache. A quick look at the math tells you what needs to be done.”²⁶

For the most part, the current aviation doctrine is sound and will apply to upcoming changes in the Army. There will need to be some tweaking as the new medium brigade force emerges but as a basis, the doctrine is solid. When the author spoke with the doctrine department at Fort Rucker, AL, they said that they were not changing Army aviation’s doctrine at the current time. Major Charles Atkins, at the doctrine department at Fort Rucker stated “Doctrinally, aviation will support the initial brigades with a mission dependent augmentation force. We will continue to perform all of our core missions (attack, cav, lift) as we do today.”²⁷ Once the medium force is fielded and the Army has had a chance to do some testing and exercises, that could change. The aviation community needs to be prepared to fill in the gaps in the event there is a loss of firepower, speed, and flexibility under the new structure.

CONCLUSIONS

Army Aviation must be prepared in the immediate future to participate in the full spectrum of conflict, from a Major Theater of War (MTW) to a Small Scale Contingency (SSC). The future force structure of Army aviation must address the numerous peacetime military engagements (PMEs) that are ongoing. It is believable that the Army will be involved with more SSCs in the future than MTWs. The idea of a multi-functional battalion better fits future scenarios.

“It’s been about three months (at the time of this report it has been six months) since Chief of Staff of the Army General Eric K. Shinseki announced his vision and called for the Army to reduce its logistical footprint. His vision of having a combat-capable brigade anywhere in the world in 96 hours will have a direct impact on us in the product support and maintenance business; we need to come up with new and better ways to sustain our weapons systems on future battlefields. The chief’s vision – his challenge – is truly a paradigm shift. The Army aviation community needs to be fully engaged in this transformation process.”²⁸

The author could not agree more. That was the basis for this report.

Still, after six months since the CSA’s announcement at the AUSA convention in October, Army aviation has yet to reveal their plans for transformation. It is known that there is a lot of work being done on the subject but the advertisement piece of this issue is not being broadcast. Why? There are over a dozen Army aviators in the US Army War College and none of them know what the latest plans are in their branch. It is hard to be an ambassador for what is ongoing in your branch when important information is being knowingly withheld by the Army aviation leadership. If there are plans that are being worked and proposed, why not send it to the Army aviation representatives at the Senior Service Colleges for their feedback. These are the future leaders of Army aviation and the future aviation brigade commanders.

To sum up this report, the author will use a quote from General Bernard W. Rogers speech on 13 October 1999 to the AUSA convention in Washington, DC. “In our business, we must not be afraid of change; we should welcome it, and always think new, think different, think better. We must not accept as

justification for actions such phrases as: "We've always done it that way"; "It's so because I say it's so"; or, "Just believe me – it's true." Seldom are actions relevant when based solely on custom, authority or faith. Competent leaders should search for ways to get feedback about their daily operations so they might improve them. And they must not be "frightened leaders," afraid of what they might learn. Leaders must strive to take the molasses out of the system and to remove the harassments and the burrs from under the soldier's saddles. Leaders must make decisions to take actions based – not on what they believe is best for their careers – but what is best and right for the soldiers."²⁹

WORD COUNT = 11,004

ENDNOTES

¹ General Eric Shinseki, Chief of Staff of the Army, delivered these words to the annual Association of the United States Army meeting in Washington, DC, 12 October 1999.

² Ibid.

³ LTG Johnny Riggs, First Army Commander, third most senior active Army aviator, delivered these words to an Army Aviation symposium in Falls Church, VA, on 11 January 2000.

⁴ MG Tony Jones', Chief of Aviation, Fort Rucker, Alabama, response to questions from an interview with Army Times which was published on 24 January 2000.

⁵ Daniel G. Dupont, Armed Forces Journal International, March 2000.

⁶ This arrangement emerged in North Africa in early 1943 when all Allied air forces were placed under the command of Air Chief Marshal Sir Arthur Tedder, who conceived the distinction between "tactical" and "strategic" air forces as theater sub-organizations and purged them "army cooperation." RAF doctrine strongly asserted the twin concepts of co-equal ground and air force commanders and, especially, "centralized control" of air resources, which was quickly accepted by American airmen under the new arrangement. Shortly thereafter, in Washington a new War Department FM 100-20 was published without concurrence of Army Ground Forces (AGF). The Field Manual asserted the RAF doctrine in bold type and forbade the theater commander to attach AAF units to ground force commanders. (Alfred Goldberg, and Lt.Col. Donald Smith, Army-Air Force Relations: The Close Air Support Issue, RAND, R-906-PR, October 1971, pp. 2-3.)

⁷ U.S. Statutes at Large, Vol. 64,p.321; quoted in Bergerson, The Army Gets an Air Force, p.163, fn.35.

⁸ The memorandums are reproduced in Enthoven and Smith, How Much Is Enough, pp. 101-104, to support their point that one of the contributions of the Systems Analysis office was to bring new ideas advanced by younger officers to the attention of the Secretary of Defense.

⁹ Major General Harry W.O. Kinnard, newly designated commander, 11th Air Assault (Test) Division, FT Benning, GA, 1963.

¹⁰ General G.P. Seneff interview, quoted in Shelby L. Stanton, Anatomy of a Division, pp.25-26.

¹¹ General Crosbie E. Saint, CINC, USAREUR, Lessons Learned from the Gulf War, a message to General Galvin and General Sullivan, 26 March 1991.

¹² Ibid.

¹³ Warfighting Studies Program, Case Study, Operation Desert Storm, US Army War College, Carlisle, PA, 17013-5050, 10 January 2000.

¹⁴ Maj. Gen. Anthony R. Jones, Commanding general, U.S. Army Aviation Center, Fort Rucker, AL, Chief of Aviation Branch, Army Aviation Magazine, 31 January 2000.

¹⁵ General Crosbie E. Saint, CINC, USAREUR, Lessons Learned for the Gulf War, a message to General Galvin and General Sullivan, 26 March 1991.

¹⁶ Ibid.

¹⁷ Ibid.

¹⁸ Ibid.

¹⁹ Center for Army Lessons Learned (CALL), Task Force CAAT Initial Impressions Report, January 2000.

²⁰ General Eric Shinseki, Chief of Staff of the Army, delivered these words to the annual Association of the United States Army meeting in Washington, DC, 12 October 1999.

²¹ SABERNET posting 2 – Prototype Brigade, MG B.B. Bell, 09 November 1999.

²² Article in the Early Bird quoting an interview with MG Dubik, designated commander of the IBCT.

²³ MG Anthony Jones, Army Aviation Magazine, Stability and Support Operations, February 29, 2000.

²⁴ Ibid.

²⁵ Ibid.

²⁶ Maj. Gen. Julian A. Sullivan, Jr., Facing the Future's Challenges, Army Aviation Magazine, 31 January 2000.

²⁷ Phone conversation with MAJ Atkins at the Doctrinal Department at Fort Rucker, AL, 31 Jan 00.

²⁸ Ibid.

²⁹ General Bernard W. Rogers speech to the AUSA Convention upon receiving the George C. Marshall Medal, 13 October 1999.

BIBLIOGRAPHY

- "Battle Labs: A New Dynamic," Army Logistian, March-April 1993, pp.14-15.
- Atkins, Major, phone conversation at the Doctrinal Department at Fort Rucker, AL, 31 Jan 00.
- Bell, B.B., Commanding General, Fort Knox, KY, SABERNET posting 2 – Prototype Brigade, 09 November 1999, SABER-L@FTKNOX-ARMORNET.ARMY.MIL.
- Bergerson, Frederick A., The Army Gets an Air Force: Tactics of Insurgent Bureaucratic Politics, John Hopkins University Press, Baltimore, Maryland, 1980, p.163, fn.35.
- Center for Army Lessons Learned (CALL), Task Force CAAT Initial Impressions Report, January 2000.
- Cooling, B. Franklin, "A History of U.S. Army Aviation," Aerospace History 21, June 1974, pp. 102-109.
- Dupont, Daniel G., Armed Forces Journal International, March 2000.
- Enthoven, Alain C., and K. Wayne Smith, How Much Is Enough: Shaping the Defense Program, 1961-1969, Harper and Row, New York, 971, pp. 101-104
- General Crosbie E. Saint, CINC, USAREUR, Lessons Learned from the Gulf War, a message to General Galvin and General Sullivan, 26 March 1991.
- Goldberg, Alfred and Smith, Donald, Army-Air Force Relations: The Close Air Support Issue, RAND, R-906-PR, October 1971, pp. 2-3.)
- Grayson, Eugene H., "Hamilton H. Howze: Visionary Giant from the Past," USA Aviation Digest, November-December 1991, pp. 2-6.
- Howze, Hamilton H., "The Howze Board," 3 parts. Army, February 1974, pp.8-14; March 1974, pp. 18-24; and April 1974, pp. 18-24.
- Jones, Anthony R. Army Aviation Magazine: Stability and Support Operations, February 29, 2000.
- Jones, Anthony R., Chief of Aviation, Fort Rucker, Alabama, response to questions from an interview with Army Times which was published on 24 January 2000.
- Jones, Anthony R., Commanding General, U.S. Army Aviation Center, Fort Rucker, AL, Chief of Aviation Branch, Army Aviation Magazine, 31 January 2000.
- Krepinevich, Andrew F., Jr., The Army and Vietnam, Johns Hopkins University Press, Baltimore, Maryland, 1986.
- McMahon, Robert E., "Air Mobility for Army Forces," Military Review, July 1958, pp.49-62.
- Monross, Lynn, Cavalry of the Sky: The Story of U.S. Marine Combat Helicopters, Harper and Brothers, New York, 1954.
- Ney, Virgil, Evolution of the U.S. Army Division, 1939-1968, Combat Operations Research Group, CORG-M-365, United States Army Combat Developments Command, Fort Belvoir, Virginia, 1969.
- Oden, Delk M., "The Army and Air Mobility," Military Review, October 1962, pp. 57-63.

Riggs, Johnny, First Army Commander, third most senior active Army aviator, delivered these words to an Army Aviation symposium in Falls Church, VA, on 11 January 2000.

Rogers, Bernard W., speech to the AUSA Convention upon receiving the George C. Marshall Medal, 13 October 1999.

Rosen, Stephen P., Winning the Next War: Innovation and the Modern Military, Cornell University Press, Ithaca, New York, 1991.

Saint, Crosbie E., CINC, USAREUR, Lessons Learned for the Gulf War, a message to General Galvin and General Sullivan, 26 March 1991.

Shinseki, Eric, Chief of Staff of the Army, delivered these words to the annual Association of the United States Army meeting in Washington, DC, 12 October 1999.

Stanton, Shelby L., "Air Cavalry and Airmobility," Military Review, January 1989.

Stanton, Shelby L., Anatomy of a Division: The 1st Cavalry in Vietnam, Warner Books, New York, 1989.

Sullivan, Julian A., Jr, Army Aviation Magazine: Facing the Future's Challenges, 31 January 2000.

United States Army Military History Institute, Senior Officers Oral History Program, Project 83-6, Harry W.O. Kinnard, Lieutenant General, US Army (Retire), Interviewed by Jacob B. Couch, Jr., Lieutenant Colonel, US Army, Carlisle Barracks, Pennsylvania, January 20, 1983.

United States Army Military History Institute, Senior Officers Oral History Program, Army Aviation, Interview with General G.P. Seneff, by Lieutenant Colonel Ronald K. Anderson, Carlisle Barracks, Pennsylvania, 1978.

Warfighting Studies Program, Case Study, Operation Desert Storm, US Army War College, Carlisle, PA, 17013-5050, 10 January 2000.

Wickert, David, Let the Transformation Begin, The Tacoma News Tribune, November 20, 1999, interview with MG Dubik, Commander, IBCT.